

Please replace the paragraph beginning on page 1, line 19, with the following rewritten paragraph:

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cont.
The stator 1 includes an outer case 1a, a first armature coil part 1b installed on an inner side of the outer case 1a, and a second armature coil part 1c installed at one side of a support member 1d.

Please replace the paragraph beginning on page 1, line 23, with the following rewritten paragraph:

The rotor 2 includes a shaft 2b and permanent magnets 2a arranged in a checkered pattern at an outer circumferential surface of the shaft 2b.

Please replace the paragraph beginning on page 2, line 2, with the following rewritten paragraph:

The first armature coil part 1b is wound in an annular shape at the inner side of the stator 1, and the second armature coil part 1c is also wound in the same annular shape as that of the first armature coil part 1b at the inner side of the stator 1, but is arranged in a checkered pattern in a perpendicular direction to the first armature coil part 1b.

Please replace the paragraph beginning on page 2, line 9, with the following rewritten paragraph:

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amended*

The first armature coil part 1b is linearly movable, while the second armature coil part 1c assembled in a direction perpendicular to the first armature coil parts 1b is rotatably movable. And, the first armature coil part 1b and the second armature coil part 1c are formed of three-phase (U, V, W, U', V', W') coils.

Please replace the paragraph beginning on page 2, line 15, with the following rewritten paragraph:

However, in the case that the first and the second armature coil parts 1b and 1c adopt the three phases, in the conventional linear motor, the plurality of permanent magnets corresponding to the first armature coil part, that is, the linear movement portion, and the second armature coil part, that is, the rotation movement portion, are arranged and assembled in a checkered pattern on the outer circumferential surface of a single shaft. Thus, when the shaft is linearly moved, it is difficult to precisely control the shaft due to the permanent magnets in the checkered pattern. In addition, since assembling the permanent magnets in the checkered pattern is very difficult, its operation efficiency is degraded.

Please replace the paragraph beginning on page 3, line 8, with the following rewritten paragraph:

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Therefore, an object of the present invention is to provide a linear motor in which a plurality of permanent magnets arranged and assembled on the outer circumferential surface of a shaft are divided into a first permanent magnet part, a linear movement zone, and a second permanent magnet part, and a rotation movement zone, in a manner corresponded to a first armature coil part and a second armature coil part as divided into a rotation movement zone and a linear movement zone, to thereby precisely control linear movement thereof.

[Please replace the paragraph beginning on page 3, line 19, with the following rewritten paragraph:]

To achieve these and other advantages and in accordance with the purpose of the present invention, as embodied and broadly described herein, there is provided a linear motor including: an outer case; a stator installed at the inner side the outer case and having a first and a second armature coil parts; first, second and third shafts assembled in the inner side of the first and the second armature coil parts of the stator; a first permanent magnet part having a plurality of permanent magnets assembled in a ring-shape at the outer circumferential surface of the first shaft; and

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a second permanent magnet part having a plurality of permanent magnets assembled at an outer circumferential surface of the third shaft.

Please replace the paragraph beginning on page 4, line 24, with the following rewritten paragraph:

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Figure 1 is a sectional view of a linear motor in accordance with conventional art;

Please replace the paragraph beginning on page 6, line ²⁴~~1~~, with the following rewritten paragraph:

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Figure 3 is a sectional view of a linear motor in accordance with the present invention. Figure 4A is a perspective view of a stator of the linear motor of Figure 3 in accordance with the present invention. Figure 4B is a perspective view of a rotor of the linear motor of Figure 3 in accordance with the present invention. Figure 5A is a side-sectional view of the stator of the linear motor of Figure 3 in accordance with the present invention. and Figure 5B is a side-sectional view of the rotor of the linear motor of Figure 3 in accordance with the present invention.

Please replace the paragraph beginning on page 6, line 19, with the following rewritten paragraph:

26 The first armature coil part 12 and the second armature coil part 13 are formed in an integral structure to that of the armature coil parts of the conventional linear motor.

Please replace the paragraph beginning on page 6, line 23, with the following rewritten paragraph:

Namely, the first armature coil part 12 is disposed in an annular to fit the outer case 11, and the second armature coil part 13 is assembled in the outer case 11 in the perpendicular direction to the first armature coil part 12. A reference numeral 14 of Figure 3 denotes a support member.

Please replace the paragraph beginning on page 7, line 5, with the following rewritten paragraph:

With reference to Figures 3 and 4B, the rotor 20 includes first, second and third shafts 21, 22 and 23 insertedly disposed in the outer case 11, a first permanent magnet 21a disposed in a ring shape on the outer circumferential surface of the first shaft 21 and a second permanent magnet 23a disposed on the outer circumferential surface of the third shaft 23.

Please replace the paragraph beginning on page 7, line 15, with the following rewritten paragraph:

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The reason why the rotor is sectioned within the first, second and third shafts 21, 22 and 23 is to provide a linear movement zone, a neutral zone, and a rotation movement zone.

Please replace the paragraph beginning on page 7, line 19, with the following rewritten paragraph:

As shown in Figures 4B and 5A, N pole, S pole, N pole and S pole of the first permanent magnet 21a are arranged in a ring shape on the outer circumferential surface of the first shaft 21 in the horizontal direction in the linear movement zone.

Please replace the paragraph beginning on page 8, line 4, with the following rewritten paragraph:

a8
There is formed a neutral zone between the first permanent magnet 21a and the second permanent magnet 23a, having a predetermined interval therebetween. The neutral zone corresponds to the second shaft 22 as shown in Figure 4B.

Please replace the paragraph beginning on page 8, line 9, with the following rewritten paragraph:

As to the linear motor of the present invention constructed as described above, since the rotor 20 is formed to be coaxial with the first, second and third shafts 21, 22 and 23, its precision can

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be drastically improved compared with that of the conventional linear motor.

Please replace the paragraph beginning on page 8, line 15, with the following rewritten paragraph:

In other words, in a case of the conventional linear motor, the shaft for the linear movement zone and the shaft for the rotation movement zone are junctioned for use, but comparatively, in a case of the linear motor of the present invention, the plurality of permanent magnets formed on the outer circumferential surface of the shaft are divided into the first permanent magnet 21a, the linear movement zone, and the second permanent magnet 23a, the rotation movement zone, and the first permanent magnet 21a is formed in a ring shape to be assembled, so that controlling of the linear movement of the linear motor, which is moved rotatably and linearly, can be improved. In addition, the permanent magnet to be assembled in the rotation movement zone of the shaft can be attached later.

✓
IN THE CLAIMS:

Please cancel claims 2 and 3 without prejudice or disclaimer of the subject matter contained therein.